
eral, mainline Protestant church usually will suffice." By getting rid of the free riders, the strict churches become stronger—and more attractive. "Strictness works," Iannaccone declares.

It can be carried too far, however. "Even though hundreds were willing to join the Bhagwan Rajneesh in Antelope, Oregon, few would have followed him to the Arctic Circle,"

Iannaccone says. Many small sects wither and die because they impose excessive demands. A 1985 study of more than 400 sects found that 32 percent never increased their membership from what it was on the day they were launched; only six percent grew rapidly. For a strict sect or church to thrive, Iannaccone concludes, it has to know when to relax its strictures a bit.

SCIENCE, TECHNOLOGY & ENVIRONMENT

Will the Endangered Species Act Survive?

A Survey of Recent Articles

Last June, an American bald eagle, found months earlier with a broken wing and nursed back to health, was set free in Maryland near the Chesapeake Bay. As the majestic creature soared into the sky, it carried even more than the species' usual symbolic weight: The bird had been given the name "Hope," and its release was timed to coincide with an announcement by the U.S. Fish and Wildlife Service that the American bald eagle—that venerated emblem of the nation—was no longer "endangered," merely "threatened." In 1974, there were only 791 known nesting pairs of bald eagles in the continental United States, but now, 20 years later, there are about 4,000. Credit was given to the Endangered Species Act (ESA) of 1973, which protects animal and plant species at risk of extinction and their "critical habitats." The controversial law, the Fish and Wildlife Service wanted it understood, had worked.

In fact, however, it appears that the ESA—which is now up for reauthorization in Congress—has not been very effective. In an evaluation in *Science* (Nov. 12, 1993), Timothy H. Tear and Patricia H. Hayward of the University of Idaho's Department of Fisheries and Wildlife Resources, along with two colleagues from the U.S. Fish and Wildlife Service, J. Michael Scott and Brad Griffith, write: "Few [endangered] species have actually recovered because of the ESA." Even the bald eagle may not owe its sur-

vival to the ESA. Thomas Lambert and Robert J. Smith, in the Center for the Study of American Business's *Policy Study No. 119* (March 1994), contend that it was not the ESA but the 1972 ban on DDT, a pesticide thought by scientists to interfere with the eagle's reproductive capacity, that saved the bird.

There is no question that the ESA, along with earlier laws, has fallen far short in its rescue mission. Of the 1,354 species (822 native to the United States) listed as endangered or threatened since 1966, only 19 have been removed from the list, including eight that were listed in error and seven that became extinct. The four apparent success stories were a plant found in Utah and three birds native to an island in the western Pacific. A 1990 General Accounting Office (GAO) report found that more than 80 percent of the listed endangered species were still declining. A 1992 GAO report found that federal authorities had managed to designate "critical habitats" for only 105, or 16 percent, of 651 listed species.

Recovery plans are supposed to be made for each of the threatened or endangered species; about 400 such plans have been drawn up. Examining those available in 1991, the *Science* authors found that 28 percent of the species for which population data could be obtained "had recovery goals set at or below the existing population size at the time the plan was written." The original recovery plan for the endangered Cali-

fornia condor, for example, estimated there were 60 birds in the wild—and set a population of 50 birds as the target for recovery. The *Science* authors surmise “that political, social, or economic considerations” might have been involved in the determinations.

Proponents of the law argue that enforcement has been inadequate. Nancy Kubasek, a professor of legal studies at Bowling Green State University, and two colleagues, writing in an 820-page issue of *Environmental Law* (April 1994) devoted to the subject, assert that the \$30–40 million that Congress annually allotted to administer the endangered species program during the Bush years “clearly” was not enough. In the same issue, U.S. Secretary of the Interior Bruce Babbitt contends that there has been a “willful failure” on the part of the public officials charged with administering the law. The ESA itself, he says, is “an extraordinary piece of legislation” and “is not the problem.”

Critics, however, insist that the ESA is the problem. Writing in *Policy Review* (Winter 1994), Robert Gordon and James Streeter of the National Wilderness Institute claim that while the law has failed utterly to accomplish its purpose, it has taken “an ever-mounting toll on individuals, society, and the economy.” The much-publicized controversy over restrictions on the Pacific Northwest timber industry designed to save the northern spotted owl is only one example of the way in which endangered-species protection and economic interests can clash. Numerous “horror stories” pointing up the conflict are cited by Gordon and Streeter and by the Center for the Study of American Business’s Lambert and Smith. Not all the stories are well founded, however. For instance, Lambert and Smith assert that if homeowners in Riverside County, California, had not been prohibited by the ESA from “disking” their land, home to the endangered Stephen’s kangaroo rat, to remove vegetation and create firebreaks, many of the 29 homes destroyed by a wildfire there in October 1993 could have been saved. But the GAO, in *Endangered Species Act: Impact of Species Protection Efforts on the 1993 California Fire* (July 1994), reports that it could find no evidence to support that view: “Homes where weed abatement, including disking, had

been performed were destroyed, while other homes in the same general area survived even though no evidence of weed abatement was present.”

The overall economic impact of the ESA has been limited, argues MIT political scientist and ESA enthusiast Stephen M. Meyer in the *New Republic* (Aug. 15, 1994): “While listing an animal as endangered may reduce the short-term profitability of a construction project or a local industry, the effects are of neither sufficient size nor duration to harm state economic performance, let alone the national economy.” That, of course, is small comfort to the people involved in the construction project or the local industry.

“The ESA, with its focus on habitat,” Secretary Babbitt acknowledges, “undeniably limits the freedom of some landowners: Freedom to raze a forest, to bulldoze habitat, or to dry up streams which contain an endangered species. The questions then become: How far? What are the restrictions like? When are you entitled to compensation?”

Since species preservation is a public good, the public should pay for it, Lambert and Smith contend: “The federal government should be required to pay for lost economic value of lands set aside to preserve habitat.” By the same logic, Babbitt counters, chemical companies that incur losses because of a federal ban on cancer-causing pesticides should be compensated by the government. That, he says, would violate the maxim that the polluter pays.

The fundamental question may be this: What interests, or obligations, do we have in the preservation of endangered species? Robert Meltz, an attorney with the Congressional Research Service of the Library of Congress, points out in *Environmental Law* that although “property rights are well analyzed in our legal and moral tradition, our legal and ethical duties to endangered species are novel and not universally accepted. Forgoing development of private land that might harm a public drinking water source is a sacrifice most landowners might accept; having one’s livelihood disrupted to preserve an endangered bird is a tougher call.” And that is one reason the ESA is in for a tough time in Congress.